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Reply to Office Action of October 12, 2005

REMARKS/ARGUMENTS

Prior to this Amendment, claims 1-5, 7-22, 24, and 25 were pending in the application.

Independent claim 14 is amended to include the limitations of dependent claim 15, which is cancelled, and dependent claim 16 is amended to correct dependencies. No new issues are raised by such an amendment as claim 15 was previously considered by the Examiner and a search on its limitations performed.

After entry of the Amendment, claims 1-5, 7-14, 16-22, 24, and 25 remain in the application for consideration by the Examiner.

Rejections under 35 U.S.C. §103

Claims 1-5, 7-8, 11-13, 15-22, and 24-25 were rejected under 35 U.S.C. §103(a) as being anticipated by U.S. Patent Publication No. 20010049741, ("Skene") in view of U.S. Pat. No. 6,779,119 ("Moshfeghi"). Applicants respectively traverse these rejections in light of the following remarks.

As discussed in Applicants' background beginning at line 19 of page 3, a problem being addressed by their invention is that fact that an e-commerce site owner "has had little or no control over the transport mechanisms through the Internet that affect latency and quality of service. For example, there had been no way to distinguish (or prioritize) between a casual browser and someone about to buy (or other higher valued user or client of a site owner). Providing caching and other quality enhancing services at a front end or cache server is helpful but does not improve or affect the quality of service provided by full connection between the requesting client or user and the origin web server or network resource. Hence, Applicants' invention is in part addressing the need for "a system and method that enables redirection to any of an arbitrary set of front end computers" to improve quality of service by selecting among the front end computers based on the communication channel between the front end

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computer or server and a back end server or a network resource (i.e., the web site or web server). In other words, a redirector server or mechanism of the invention selects among available front end servers based on this Internet or network communication channel and does so in a manner that is transparent to the requesting client or browser (see, for example, Applicants' specification at the two paragraphs beginning at line 25, page 6).

Referring to claim 1, the system includes a web site and a plurality of front-end servers. A plurality of second channels is provided to support communication "between each of the front-end servers and the web site." Note, these channels are NOT between the requesting user or client and the front-end servers. A redirector server is provided in the system that is "operable to select one front-end server" based upon a determined "composite quality factor" for the plurality of second channels. Skene even when combined with Moshfeghi fails to teach selecting a front-end server based on a composite quality factor determined for the channel between that server and the web site (e.g., web server or network resource).

The Office Action at the bottom of page 3 cites Skene for teaching the plurality of second channels of claim. However, the Office Action is citing Skene at Fig. 1 and states that the client 112 can communicate with EDNS servers over the Internet. These Skene channels are not the plurality of channels called for in claim 1 but instead are between the client sending the domain request and, at best, the front-end servers of claim 1. If the virtual servers discussed in Skene in paragraphs [0062] to [0065] with reference to Figure 4 are considered the front-end servers, Skene still fails to teach the plurality of second channels between these and the web site (or network resource).

More specifically, the redirector of Skene load balances among the virtual servers to determine the "optimal" virtual server. However, such load balancing

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does not involve the "second channels" between these virtual servers and the network resource of Skene. The metric information used is collected by the EDNS server(s) "out of band" and such collection processes are described in detail beginning at paragraph [0074]. Briefly, the controller for each virtual (or front end server) is determined based on "out of band" processes as being "up" or "down". In paragraph [0074], Skene teaches that it may be useful for EDNS server to collect out of band, metric information "associated with a path for a packet that is sent between the client and the virtual server" so as to select the optimal virtual server. However, this fails to teach the limitations of claim 1 as the system of claim 1 calls for composite quality factors to be determined for the second channels (i.e., the channel between the front-end server and the web site) not between the requesting software application and the front-end servers.

In this manner, the system of claim 1 is able to optimize quality of service in the communications between the front-end server and the web site rather than in the often relatively small portion between a client and front end server as taught by Skene. Because Skene fails to teach the second channels and a redirector server that selects front-end servers based on metrics in these second channels, Skene fails to support a rejection of claim 1 under 35 U.S.C. 103.

Further, Moshfeghi fails to overcome these deficiencies of Skene. The Office Action at page 4 cites Moshfeghi for teaching similar quality criteria as taught by Applicants with regard to the "composite quality factor." However, Moshfeghi fails to teach the redirector that acts as called for in claim 1. Hence, the combined teaching of these references fails to support a prima facie case of obviousness.

Applicants would also like to restate their arguments provided in the February 14, 2005 Amendment at page 7. Briefly, these arguments noted that Skene describes a system in which an EDNS returns a virtual IP address, not a unique network address, to a requesting primary DNS server. As noted in this

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prior Amendment, a virtual IP address is by definition associated with multiple servers or multiple domain names. Hence, a virtual IP address is not a "unique network address" as called for in claim 1. Applicants believe that this argument has yet to be properly addressed by the Examiner.

Claims 2-5, 7-8, and 11-13 depend from claim 1 and are, for at least the same reasons, not obvious in light of Skene and Moshfeghi. Further, claim 3 calls for the web site to act to redirect the request from the software application on the first channel to the redirector server. In other words, the web site has the intelligence to request redirecting from the redirector server for requests received over the first channel. The Office Action cites Skene for providing this teaching at paragraph [0046] but the Examiner states the local DSN is the web site but this is not the web site called for in claim 1 nor is it equivalent to the network resource accessed by a requesting client as discussed in Skene (and the network resource in Skene does not redirect requests from the clients to a redirector server or other such mechanism). For this additional reason, claim 3 is believed allowable.

Independent claim 14 is amended to include the limitations of claim 15, which is cancelled. Claim 15 included limitations similar to claim 3, and hence, claim 14 is believed allowable over Skene and Moshfeghi for the reasons provided with regard to claim 3. Claims 16-19 depend from claim 14 and are believed allowable as depending from an allowable base claim. Claim 16 calls for the software application to be caused to generate a second request directed to the redirector server. Skene and Moshfeghi fail to teach this limitation and instead, appear to teach automatic load balancing without requiring the requesting client to send a second request to a redirector. No citation to any reference is provided for showing this limitation. For this additional reason, claim 16 is believed to be allowable over the cited two references.

Independent claim 20 includes limitations similar to claim 1 and claim 14,

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and hence, claim 20 is believed allowable for the reasons provided for allowing claims 1 and 14. Specifically, neither of the cited references shows the responding step of claim 20. Claims 21, 22, and 24 depend from claim 20 and are believed allowable as depending from an allowable base claim. Further, claim 24 requires the index determining to include combining factors "representing both an estimate of the topological location of the network client with respect to each of the available channels and current quality of service provided by each of the available channels. The Office Action appears to be taking Official Notice for the limitation of performing "an estimate of the topological location of the network client with respect to each of the available channels" (see, the rejection of claims 9 and 10). Applicants oppose such taking of Official Notice and request the Examiner to provide a specific example of estimating topological location of a network client with respect to a number of available channels. Even if such a reference is found, teaching is required of determining an index that combines such an estimate with "the current quality of service." As discussed with reference to claim 1, Skene teaches away from the determination of "current" quality of service by teaching that metrics for choosing an optimal virtual server should be selected "out of band," and Moshfeghi teaches predicting bandwidth needs for a client. Hence, neither reference teaches using "current" quality of service provided by available channels.

Independent claim 25 includes limitations similar to claim 1, and it is believed allowable over Skene and Moshfeghi for the reasons provided for claim 1. Specifically, Skene fails to discuss "an enhanced communication channel between the set of intermediary servers and the origin server."

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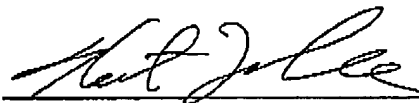
Conclusions

In view of all of the above, it is requested that a timely Notice of Allowance be issued in this case.

No fee is believed due for this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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